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BEFORE THE BOARD OF APPEALS  
IN THE US PATENT OFFICE

EXAMINER - Nguyen

GROUP - 2171

SN - 09/900569

FILED - 7/5/01

BY - Ogino

SIRS:

This Brief is in support of the Appeal filed 7/21/04 of the Examiner's Final Rejection of claims 76-92 in the above application.

The Brief is filed in triplicate together with the required fee of \$330.00.

(1) STATUS OF CLAIMS

Claims 76-92, being all of the claims in the above application, have been finally rejected and are now on appeal. These claims were finally rejected on the following grounds: Section 103, as being "unpatentable" over BALLANTYNE (5,867,821) in view of KOTAKE (5,581,460) (Claims 76, 78-84, 86, and 88-92); over BALLANTYNE in view of KOTAKE and ROEWEN (5,734,915) (Claim 77); and over BALLANTYNE in view of KOTAKE and TANAKA (6,564,256) (Claims 85, 87).

Claims 76-92, subject of the appeal, are set forth in the Appendix A-F, attached hereto.

(2) STATUS OF AMENDMENTS AFTER FINAL REJECTION

None of the Amendments submitted after the Final Rejection have been entered by the Examiner. Accordingly, the listed claims 76-92 appearing in the appendix and being on appeal do not contain any



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I hereby certify that the correspondence upon which this notice is placed is being deposited with the US Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, Box 1450 Alexandria, VA 22313, or to US Trademark Office, 2800 Crystal Drive, Arlington, VA 22202, on the date set forth below. MOONRAY KOJIMA, ATTORNEY

Date 8/24/04 (signed)

APPEAL BRIEF

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of the proposed amendments.

(2A) LIST OF CITED REFERENCES

- (1) USP 5,867,821 issued 2/2/99 to BALLANTYNE
- (2) USP 5,581,460 issued 12/3/96 to KOTAKE
- (3) USP 5,734,915 issued 3/31/98 to ROEWER
- (4) USP 6,564,256 issued 5/13/03 to TANAKA

(3) SUMMARY OF THE INVENTION

The instant invention encompasses apparatus (claims 76-87) and method (claims 88-92) of registering, storing and accessing medical images and information from one or more subscribers connected via a generally available network to a single server having a mechanism for checking the legitimacy of the subscriber before allowing registration or accessing of the images and information. The single server comprises means for registering and storing the images and information and means for accessing such images and information and transmitting same through the network to the subscriber at its request only after the legitimacy of the subscriber is checked.

For example, a subscriber, such as a doctor, located at a remote office can use his computer connected to the network, to which the single server is connected, for registering or storing medical images and information by first entering a secure code which is checked by the server device for legitimacy, and requesting entry of the images and information. After checking legitimacy, the server allows entry into the system and recording of the images and information provided by the subscriber.

In a similar reverse manner, upon entry of the authorization

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code and request, the doctor can obtain access to any authorized images and information through his remote computer connected via the network to the single server. The server first checks the validity and legitimacy of the subscriber and request, and then if authorized, transmits the desired images and information.

Advantageously, a single protocol is used by all of the subscribers for entry to record and to access. In other words the entire system is "unified", that is the subscribers, network and server are integrated as one system. Thus, efficiency, reliability and simplicity are considerably improved. Also, the costs of storage and accessing of medical images and information for a wide range of users from patients, doctors, and hospitals to others is greatly reduced. Also, medical care quality is greatly improved because of the ready access to information and images by all these parties. And this is possible regardless of where these parties are located provided they can be connected to a "generally available network" such as the internet, to which the "single server" is connected.

Before our invention, each hospital, doctor, etc had its own library in which it placed images and information. Thus, only if a party were in the hospital, etc, could he store or access the stored medical images and information. There was no system which incorporated a single server connected to a network, which was generally available to the public, to which an unrelated subscriber could be connected for storage and accessing of medical images and information and using a single protocol. On the other hand, we

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have made that jump by having means for checking the legitimacy of the subscriber prior to storing or accessing. This is further made advantageous by causing all subscribers to use a single protocol.

Accordingly, one important feature is "means for checking and verifying legitimacy of a subscriber seeking to access desired medical images and information by signalling through the network". Thus, we are able to control the storage and accessing of images and information at a single location which is available through a generally available network to a number of subscribers. A stranger, i.e. without an assigned code, would be unable to invade the single server or central control system used therein, to identify any concerned individual or information thereof. A third party could not "steal" any unauthorized medical information. Also, we thus have in the central control system "means for processing and delivering said medical images and information through said network to said subscriber seeking access after checking and verifying legitimacy of the subscriber to the desired medical images and information". Moreover, in our system we include in the single server, mechanism for "compressing" and "decompressing" the information data sent through the network. This allows for large scale storage of data from the multiple subscribers using only the single server connected to the network available to the multiple subscribers. Furthermore, we have in the single server a backup system for the images and information which are registered in the data base. In this manner, safety, reliability and permanence are realized.

Other features and greater details are covered by the sub-claims and will be discussed further under the heading "Arguments".

#### #4. ISSUES

(1) Is the invention recited in Claims 76, 78-84, 86, 88-92 made obvious under Sec. 103 by a combination of Primary reference BALLANTYNE (5,867,821) in view of Secondary reference KOTAKE (5,581,460)?

(2) Is the invention recited in Claim 77 (which is a sub-claim of main claim 76) made obvious under Sec. 103 by a combination of Primary reference BALLANTYNE in view of Secondary reference KOTAKE (as directed to the main claim 76) and further in view of Tertiary reference ROEMER (5,734,915)?

(3) Is the invention recited in claim 85 (which is a sub-claim of sub-claim 83 and main claim 76) and claim 87 (which is a sub-claim of main claim 76) made obvious under Sec. 103 by a combination of Primary reference BALLANTYNE in view of Secondary reference KOTAKE (as directed to main claim 76, and to sub-claim 83 and main claim 76) and further in view of Tertiary reference TANAKA (6,564,256)?

#### #4A- APPLICANT'S POSITION

As to each of the above recited ISSUES, it is applicant's position that:

(1) The invention recited in claims 76, 78-84, 86, 88-92 is NOT (negative) made obvious by any combination of BALLANTYNE and KOTAKE, and furthermore, that all of such claims are allowable as reciting an invention which meets the statutory requirements

(2) The invention recited in claim 77 is NOT(NEGATIVE) made obvious by any combination of BALLANTYNE, KOTAKE and ROEWER; and furthermore, that claim 77 is allowable as reciting an invention which meets all statutory requirements.

(3) The invention recited in claims 85 and 87 is NOT (NEGATIVE) made obvious by any combination of BALLANTYNE, KOTAKE and TANAKA; and furthermore, that claims 85 and 87 are allowable as reciting an invention which meets all statutory requirements.

#### #5. GROUPING OF CLAIMS

A. GROUP 1. Main Claim 76 and Subclaims 78-84 and 86 depended from main claim 76; and Main Claim 88 and Subclaims 89-92 depended from main claim 88.

B. GROUP 2. Subclaim 77 depended from main claim 76.

C. GROUP 3. Subclaims 85 and 87, depended ultimately from Main claim 76.

Claims 76-87 are directed to an apparatus (i.e. system); and Claims 88-92 are direct to a method.

Pursuant to the Rules on Grouping of Claims, Applicant hereby states that the claims of each of the above groups do not stand or fall together. In the "Arguments" portion hereof, each and every claim will be discussed and arguments presented as to patentability.

#### #6. ARGUMENTS

In the following discussion, applicant will first present argumentation as to the main claims 76 and 88, which are similar except that one is directed to the system and the other to the method. The arguments then will be directed to each claim and the contentions

of the Examiner.

CLAIMS 76 ,78-84, 86 AND 88-92 REJECTIONS UNDER SEC. 103 WITHOUT BASIS. CLAIMS ARE ALLOWABLE

There are two main claims 76 (direct to a system) and 88 (directed to a method). The remaining claims are sub-claims. Each of the sub-claims, and the Examiner's comments directed thereto, will be set forth hereinbelow.

MAIN CLAIM 88 (DIRECTED TO METHOD)

There is a special problem regarding claim 88. Although the Examiner has alleged "Claims 76,78-84, 86 and 88 - 92 stand rejected under 35 USC 103(a) as being unpatentable over Ballantyne (5,867,821) in view of Kotake (5,581,460)", there is not one word of her reasons or grounds for such rejection of claim 88 (the same applies to subclaims 89-92 which are depended therefrom).

This is in complete disregard for the requirements of MPEP 706.02(j) which requires that the Examiner in a Sec. 103 rejection set forth in the office action ..."(A) the relevant teaching of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate...."

The only reference in the office action to claim 88 was noted in the rejection of claim 88, namely "Regarding claim 88, all the limitations of this claim have been noted in the rejection of claims 76, 80 and 81 above. It is therefore rejected as set forth above."

But, claims 76, 80 and 81 are all directed to "system" or "apparatus", and claim 88 is directed to a "method". Comments regarding an apparatus or system claim are not necessarily appli-

cable to the method claim. Hence, the alleged lack of grounds clearly do not support any rejection under 103.

In other words, the Examiner has not supported her rejection of claim 88 (and also sub-claims 89-92 depended therefrom), in a MANNER REQUIRED BY THE MPEP. Thus, applicant's due process rights have been violated, and these method claims of claims 88-92 have not been validly rejected.

Accordingly, claims 88-92 have been or should have been held to be allowed. Such confirmance of allowance is thus respectfully requested of the Board.

However, to be completely responsive in this Appeal, applicant will incorporate in the arguments merits of claim 88 when discussing the merits of the other main claim 76.

#### MAIN CLAIM 76 (DIRECT TO SYSTEM)

To set the stage for the argumentation, we will first discuss generally the invention, references and claim 76. Then, we will discuss the specific allegations of the Examiner in rejecting claim 76.

#### General Comments and Argumentation

Briefly, our invention encompasses "medical image servicing system " (claim 76) and "method" thereof (claim 88) comprising "a single server" at one location connected to a "network generally available to the public", such as the Internet, to a number "at least one" subscriber located remotely thereof, for example, with the "single server" having "a data base", and "means for checking and verifying legitimacy of a subscriber seeking access"; " means for registering in said data base medical images"; and "means for



processing and delivering medical images after verifying the legitimacy of the subscriber". The medical images and information, subscriber ID, instructions on processing, etc, can be sent from the subscriber through the internet to the single server, and upon verification of legitimacy of the subscriber and request, the subscriber can send the medical images and information for registration, storage and/or processing to the "single server". Similarly, the request can be made for the delivery of the medical images or information or processed images and information from the data base and single server through the network to the subscriber.

Advantageously, our invention enables increased availability of medical services throughout the USA at very low cost. All a doctor, for example in Wyoming, has to have is a computer in his office, to store, process and access medical information through our invention, with the "single server" thereof located for example in New York. The remote (e.g. Wyoming located) doctor does not need to have any expensive equipment to process the medical information, since processing can be done at the "single server" side with equipment contained at the "single server" side.

Other features of the invention include in the "single server" "means for compressing" and "means for decompressing" data. Thus, the invention provides a greater storage capacity and increased transmission capacity, thus lowering cost thereof.

Also, our invention includes "means for providing backup..". Thus, safe permanent storage of data is assured by our invention.

The Examiner alleges that Ballantyne teaches all of the elements of the invention recited in main claim 76, except for "means for registering in said data base medical images and information transmitted through said network by said at least one subscriber". She furthermore alleges that Kotake teaches such means for registering, and therefore, under Section 103, the claims 76-92, are "unpatentable" since the invention would be made "obvious" thereby.

Applicant strongly disagrees with the Examiner. First of all Ballantyne does not teach or make obvious all of the elements of claim 76 except the means for registering.

The following elements of claim 76 are NOT taught by Ballantyne:

- (1) "medical image servicing system"
- (2) "network generally available to the public"
- (3) "subscriber connected to the network (which is generally available to the public.)"
- (4) "a single server" "connected to the network generally available to the public".
- (5) "data base" which is within the "single server".
- (6) "means for checking and verifying legitimacy of a subscriber".  
which is contained within the "single server".
- (7) "means" contained within the "single server" for processing  
and delivering said medical images and information through  
said network to said subscriber seeking access after checking  
and verifying legitimacy of said subscriber to said desired  
medical images and information".

- (8) the "medical image" processed in the "single server" selected from "the group of MRI, X-ray cT, Ultrasound, PET, digitized X-ray and CR".
- (9) contained within the single server "means for compressing" and "means for decompressing".
- (10) contained within the "single server" "means for producing backup".
- (11) contained within the single server "means for registering in said data base medical images and information transmitted through said network (which is generally available to the public) by said at least one subscriber."

Completely contrary to the Examiner's allegations, Ballantyne is nowhere even close to the instant invention. Ballantyne discloses, for example in FIG. 1, a Master Library (ML) 2 to which is connected "internally in the hospital" through DEDICATED fiber optical cables, coaxial cable or twisted pair, to "Nursing Station 6, PCS (Patient Care Stations) and therethrough to PDA (Personal Data Assistant). The PCS is generally a hospital bed. The PDA is a hand held computer or terminal.

External to the hospital, in FIG. 1, the ML 2 is connected through DEDICATED fiber optics, coaxial cables, twisted pairs, or DBS (Direct Broadcast Satellite) to various patients, doctors, clinics and libraries. The communication links external to the hospitals such as fiber optics, coaxial cables, twisted pairs, DBS, are DEDICATED in that they are connected permanently to the particular subscriber, such as patients, doctors, clinics, libraries.

It is NOT a "network" which is "generally available to the public". In other words, except for the doctor authorized to practice in the particular hospital in which the ML is located, any outside doctor cannot have a dedicated or permanent line connecting his office to the hospital ML 2. Thus, clearly, the communication link between the ML and the subscribers is NOT a "network generally available to the public". This is well known to any person skilled in the art reading Ballantyne. We find it rather disconcerting that the Examiner continues to argue that Ballantynes communication links (note both internal and external to the hospital) he uses fiber optics, coaxial cables and twisted pairs. Thus, one would think the Examiner would readily conclude that the same means of communication located external to the hospital are similar dedicated and NOT "network generally available to the public". It would seem that the Examiner is biased against this invention. She had already decided, arbitrarily, that the invention was not patentable and then found Ballantyne and misinterpreted the disclosure to fit into her biased thinking. Otherwise, one cannot understand how this rejection could have continued for so long even though applicant persistently tried to work with the Examiner.

The master library (ML 2) of Ballantyne contains a plurality of different servers for different purposes. This does not meet our "recitation" of "a single server". Moreover, the ML 2 is NOT comparable to our recited "medical image servicing system" of our invention.

Ballantyne uses different servers for providing different data types to different locations and types of locations. Thus, there

is not equivalent to our "single server". Moreover, none of the Ballantyne plurality of servers contains or comprises the various "means" set forth in claim 76 and above listed (1)-(11). Accordingly, clearly, Ballantyne is nowhere close to our recited invention.

Even if extended, Ballantyne would not show or make obvious the various above listed "means" which are disposed within (comprises) "single server". In other words, not only does the ML2 of Ballantyne not satisfy the requirements and objectives of applicant's single source, but, also, Ballantyne's ML2 does not comprise such means as recited in claim 76, as being contained in the "single server". Thus, even if extended, there is no teaching of such functions by Ballantyne which could be extended to make obvious the teachings or functions of the "single server", the "network generally available to the public" and connected thereto, and the various "means" which are part of the "single server". The objectives, functions and operations of Ballantyne are nowhere close to our invention. Thus, there is no way that Ballantyne supports any rejection under Sec. 102 or Sec. 103.

Turning now to KOTAKE, clearly he does not teach or make obvious that which the Examiner contends Kotake teaches. First of all, Kotake's item 7a of Fig. 5 is NOT contained in a "single server". Thus, there is no way it can be considered equivalent to any means recited in our claims as being within the "single server".

Kotake's image register 7a is contained within "Second Diagnostic Report Forming Apparatus 200". It is not a "means for registering

which is within the single server. Moreover, it is not a "means for registering in said database medical information transmitted through said network (which is recited in claim 76 to be "generally available to the public) by said at least one subscriber".

There is no communication link shown to any subscriber in Kotake. Nor is there any "network" shown in Kotake. These elements must be connected to the "image register 7a" of Kotake. Thus, clearly, the element of claim 76 which is alleged to be taught by Kotake is in fact, not taught at all. Also, no amount of extended teaching of Kotake would make obvious such means. The register 7a of Kotake has an entirely different objective than does our recited "means for registering... " of claim 76. Thus, even if extended, Kotake would not teach or make obvious such recited "means for registering.."

Thus, clearly, even if Ballantyne and Kotake were to be combined, there would still be lacking the above listed 11 elements of claim 76. Also, even if the combined teachings were extended, the extended teaching would still not make obvious the recited invention. The objective, operational steps, function and structure are completely different so that our invention would not be made obvious by the combination of Ballantyne and Kotake.

Accordingly, we submit that all of the claims are allowable over the combined teachings of Ballantyne and Kotake, and such allowance is requested of the Board of Appeals.

The same comments shown above are applicable to the method claim 88 and are to be considered to be incorporated by reference hereat. Claim 88 -92 directed to the method are allowable.

Specific Allegations regarding Claim 76 and Applicant's Response

1. The Examiner alleges Ballantyne discloses: "A medical image servicing system (40, fig. 2) comprising a network (22, fig. 2) generally available to the public a transmitting subscriber (as physicians offices, clinic laboratories fig. 1) connected to said network" Also it is alleged "at least one subscriber connected to said network for transmitting and receiving medical image and information through said network (col. 11, lins 11-27)".

Applicant strongly disagrees as to each and every point.

(A) As to the "medical image servicing system". In our claim 76, this is the title of the claim, and covers the material being claimed. In contrast, the "imaging system 40" in FIG. 2 of Ballantyne, is only a part of the system. It is not the material being covered by the claim itself. Moreover, it seems the Examiner has not read carefully what "imaging system 40" is. We have carefully studied the relevant parts, and reached the conclusion that "imaging system 40 is a Xerox machine , i.e. a photocopier". Clearly, we are not claiming as new a photocopier. See Col. 6, line 29 which states "imaging system 40 (Xerox) are integrated with the ML to facilitate the scanning of document and image material existing in hard copy format". Thus, clearly, the Examiner allegation referring to "A medical image servicing system" is clearly in error in FACT and should be withdrawn.

(B) As to the applicant claimed "network generally available to the public", the Examiner cited item 22 of Fig. 2 of Ballantyne. The Examiner is wrong. She does not appear to have carefully read

the Ballantyne disclosure. Item 22 (like item 24) is a BUS and called "Local Area Network , which is disposed within the hospital. It is not (negative) "generally available to the public". Moreover, outside communication to Physicians offices, etc, is through a "dedicated" communication means, such as DBS (direct broadcast system) fiber optics, coaxial cable, twisted wire pair (see FIG. 1). But, none of these is "generally available to the public". Careful study will reveal that Ballantyne's entire system is operable only through use of dedicated communication means. It does not use a "network generally available to the public".

(C) In Fig. 1, Ballantyne shows physicians offices, clinics laboratories. But, they are not connected to a "network that is generally available to the public" as recited in claim 76. As just mentioned, in Fig. 1, the "physicians offices", "clinic laboratories" etc, are connected to the ML (master library) through dedicated communications means, such as coaxial cable, DBS, fiber optics, twisted wire pairs.

In point of fact, this Ballantyne system is that which is old in the art. Prior to our invention, each hospital had its own library for storage of X-rays, etc. Hospital doctors could call in (twisted wire pairs) and obtain medical information from the ML by fax or computer printer. Everyone associated with the single hospital used its coding, protocol, etc. The lines were dedicated so that outsiders did not have access. All of the disadvantages of the prior art exist in Ballantyne.

(D) The quoted portion col. 11, lines 11-27, does not teach



what our claim recites. It describes a PCS (personal care station.. known to outsiders as a hospital bed) which uses a coaxial cable or the like connected inside the hospital to the Master Library (ML). The "coaxial cable" which is a "dedicated" line is clearly not a "network generally available to the public". Also, the PCS is a bedside computer terminal, which is located inside the hospital not "connected to the network generally available to the public".

Thus, the Examiner through a clever sleight of hand, has compared oranges and apples and implies that her comparison is valid. The PCS is a subscriber in the larger term, but is not located outside the hospital, nor connected to the "network generally available to the public." Thus it is not an equivalent.

Clearly, the Examiner is in error on these basic features, and hence, the entire rejection falls apart. The Examiner should therefore withdraw the rejection and allow the claims.

2. The Examiner alleges that Ballantyne uses only a "single server (no support is proved because this is contrary to the facts) connected to said network for servicing said at least one subscriber upon signaling by said at least one subscriber and through said network (as physicians offices, clinic laboratories ,fig. 1)."

Applicant strongly disagrees. First of all, Ballantyne uses a plurality of servers. See col. 4, lines 54-col. 6, line 19. Moreover, Ballantyne does not use a "single server" to service the subscribers through the "network which is generally available to the public". Moreover, the "subscriber" does not signal a "single server" through the "network which is generally available

to the public.

Accordingly, the Examiner should withdraw the incorrect allegation and allow the claims.

3. The Examiner alleges then that Ballantyne discloses: "said single server comprising a data base" (2, master library, fig. 1)"

Applicant strongly disagrees. Item number 2 is the master library (ML) discussed at col. 4, line 1, etseq. BUT, this is NOT the "single server" recited in our claim. The ML is a memory storage means and also has a plurality of different servers therein. (See col. 4, lines 52-58).

In other words, item number 2 is NOT a "single server". In our claim, the "single server" has a "data base". In Ballantyne the ML has a plurality of servers and a data base in a memory therein. The "single server" of our claim is clearly not the same or similar, nor does it perform the same functions, as the master library of Ballantyne.

Accordingly, the Examiner's rejection should be withdrawn and the claims allowed.

4. The Examiner then alleges that Ballantyne discloses "means for checking and verifying legitimacy of a subscriber to access desired medical images and information by signaling through said network (col. 7, line 66-col 8, line 64)"

Applicant strongly disagrees. at this point there is described In Fig. 2 "ML is IMPLEMENTED with the security architecture 48". But, there is no teaching that "said SINGLE server" comprises

"means for checking and verifying legitimacy of a subscriber seeking to access desired medical images and information by SIGNALING through said NETWORK". In other word, BALLANTYNE differs in that ML is IMPLEMENTED; it does not teach that, as in our recited invention, the SINGLE SERVER COMPRISES. Thus, the security arrangement of BALLANTYNE is completely different from our recited invention's "means for checking and verifying... etc" which is part of the "single server".

5. The Examiner then alleges that Ballantyne discloses: "means for processing and delivering said medical images and information through said network to said subscriber seeking access after checking and verifying legitimacy of said subscriber to said desired medical images and information col. 7, line 66 to col. 8, line 64". Also, there is disclosure "said medical images being associated with at least one image selected from the group consisting of MIR, X-ray, CT, ultrasound , PET, digitized X-ray and CR (col. 9, lines 47-50)".

Applicant disagrees with the Examiner. Col. 7, lines 66-Col. 8, line 64 discusses the security architecture 48. BUT, there is absolutely no teaching of "means for processing..."; there is no discussing of processing. Moreover, there is no discussion of "delivery of said medical images and information". Nor is there discussion of using a "network" which is "generally available to the public" The foregoing is the case, regardless of what Ballantyne does to check the validity of the subscriber ID.

Furthermore, Col. 9, lines 47-50 teaches "this is the situation when specific lossless compression techniques are used in the

processing of medical files relating to high resolution images, i.e. MRI or X-ray video data". Thus, clearly, this cited portion teaches only that "compression of data" can be used for MRI or X-ray images. But, that is irrelevant to the "means for processing ...." we recite in claim 76. We are not limiting ourselves to "compression" and "decompression", nor any particular type of medical images. Clearly, the claims are allowable over the references.

6. The Examiner then alleges that Ballantyne discloses: "wherein said single server further comprises", then states "means for compressing in data size medical information when transmitted through said network and for decompressing in data size said medical images to original size when received through said network by said at least one subscriber seeking access (col. 9, lines 40-57)".

It is important to again repeat that we claim "a single server". In contrast, Ballantyne has a plurality of different servers. Thus, none of the claimed material is shown by Ballantyne or made obvious thereby. The Ballantyne disclosure is completely different from our recited invention. Not only do we differ as to the number of servers used; but, we also differ as to the "network (being) generally available to the public", whereas, Ballantyne's communication to the outside of the hospital is via a dedicated line. What the Examiner is trying to do is compare apples and oranges. The two inventions are mutually exclusive in differences, and one cannot be extended to make obvious the other.

Furthermore, in our claim, the "single server" comprises the

means for compressing and means for decompressing in data size". Ballantyne uses a "plurality of servers" so which one has such means for compression and means for decompression. There is no teaching on that point. Thus, the Examiner's grounds are completely baseless and should be withdrawn, and the claims allowed.

7. Finally, the Examiner alleges that Ballantyne discloses: "means for producing backup of said medical images registered in said data base (col. 13, lines 10-20)". Applicant strongly disagrees. The quoted portion does not teach that which is alleged by the Examiner.

Instead, the quoted portion states that an updated patient record is sent back for use as replacement for the existing record. If the old record is needed, it is retained.

BUT.. Ballantyne does NOT teach that an "single sever" comprises means for producing backup of any medical images registered in the data base. NOTE.. the records are maintained at the "nursing station" not at the ML. Then, as the patient is moved, the records are moved. Then, upon discharge, the records are sent to the ML.

BUT.. the ML does not have any "means for producing backup". In the Examiner's analysis, our "single server" must be in the "ML". But, the ML has no means for producing backup. Thus, Ballantyne does not teach or make obvious this feature of claim 76 and the Examiner has again erred in fact. What the Examiner alleges is taught by Ballantyne is not in fact taught by Ballantyne, and no extension of his teachings would make same obvious. Clearly,

Ballantyne does come close to our recited invention.

The Examiner then ADMITS that "Ballantyne didn't disclose: "means for/<sup>registering</sup>in said database medical images and information transmitted through said network by said at least one subscriber".

We agree with the Examiner, Ballantyne does not teach or make obvious such feature.

But, to make up for the admitted deficiency, the Examiner alleges that KOTAKE discloses "means for registering in said database medical images and information transmitted through said network by said at least one subscriber (7a, fig. 5 and corresponding text)". After carefully studying the Kotake patent, we strongly disagree with the Examiner. KOTAKE does not teach what the Examiner contends it does. She errs in a profound manner.

The most important part of the claim that is left out by the Examiner is that "single server comprises..". That is the "means for registering" is a part of the "single server". That is clearly not taught by , nor made obvious by Kotake.

BUT, ALSO IMPORTANTLY, the Examiner seems to have either deliberately omitted this missing feature by Ballantyne, or completely misunderstood the significance of this feature. In any case, both Ballantyne and Kotake do not have "a single server" and both Ballantyne and Kotake do not have the "single server comprising... means for registering in said database medical images and information transmitted through said network by said at least one subscriber."

In Kotake, the "image register 7a" is disposed within "Second diagnostic report forming apparatus 200". Thus, this is

NOT for registering medical images sent through a network generally available to the public in a data base also disposed within a single server.

Thus, the rejection based on Kotake allegedly making up for a deficiency in Ballantyne, falls apart. Even if the Ballantyne reference and Kotake reference were combined, the combined teaching would still be missing the essential features of the invention as recited in claim 76, in the manner as above discussed. Moreover, even if the two references were combined and extended, there would still not be sufficient teaching to make obvious the recited invention. The basic features of our invention, which are recited in claim 76, and which have been discussed in detail hereinabove, are not taught by nor made obvious by any combination of the cited references Ballantyne and Kotake. Accordingly, clearly, all of the claims in the application 76-92 are allowable over the art.

In order that this brief contain a discussion of all the claims despite what is believed to be an unmeritorious rejection of the method claim 88, we will discuss claim 88.

#### CLAIM 88

In terms of the method steps of claim 88 (and the subclaims 89-92), the features discussed above with reference to claim 76 are not taught by nor made obvious by by the combined art Ballantyne and Kotake. The "network generally available to the public"; "a plurality of subscribers connected to the network", and a "single server connected to the network for commonly servicing said plurality of subscribers upon signaling" have been discussed above, and

are features which are allowable. In addition, claim 88 recites the following method steps, each of which have been discussed above with reference to claim 76: "one of said plurality of subscribers requesting register, delivery and/or processing of medical images through signals sent through said network to said single server"; "checking and verifying legitimacy of the request from said one subscriber transmitted through said network to said single server and when such request is determined to be legitimate causing a signal to be sent through said network to said one subscriber to request the medical images to be registered, delivered and/or processed"; "said one subscriber then sending through said network said medical images to said single server"; and "registering, delivering and/or processing said medical images in a data base disposed in said single server".

Each of these steps has been discussed with reference to the cited references Ballantyne and Kotake, and with reference to the main claim 76. All of the arguments and comments stated above are to be considered to be made a part hereof by reference with respect to claim 88 and its patentability over the same cited art.



SUBCLAIMS 78-84,86 AND 89-92 REJECTIONS NOT SUPPORTED  
BY FACTS: CLAIMS ARE ALLOWABLE

Sub-claims 78-84, 86, and 89-92 were rejected under Section 103 as being unpatentable over BALLANTYNE in view of KOTAKE. Applicant respectfully traverses such rejections as being without foundation. No combination of the cited references teaches or even if extended makes obvious the instantly recited invention in each of the sub-claims 78-84, 86, and 89-92.

It is to be understood that the below arguments directed to sub-claims 78-84, 86 and 89-92 are in addition to the arguments set forth respect to main claims 76 and 88 from which these sub-claims depend, and that all of such arguments directed to the main claims 76 and 88 are to be considered to be part and parcel hereof by reference, and are to be considered to be repeated hereat.

In addition, it is to be understood that even though the sub-claims 78-84, 86 and 89-92 are sub-claims, the subject matters thereof in each sub-claim is patentable above and beyond the subject matter of the main claims 76 and 88 from which each sub-claim depends. Thus, each claims will be considered to stand on its own for patentability.

Each of the claims 78-84, 86 and 89-92 will be now discussed and the comments by the Examiner will be examined in detail.

CLAIM 78.

In addition to allegations based on main claim 76, the Examiner alleges that Ballantyne/Kotake (We presume she means only Ballantyne in this and all of the other sub-claims 78-84,86 and 89-92, because she has cited specific portions of only Ballantyne. Thus, reference

to specific portions of a patent will only refer to Ballantyne) discloses: "wherein said at least one subscriber is a software executing subscriber running medical software for transmission through said network to said single server (col. 4, lines 30-36)" and "wherein said single server manages medical software and registers said medical software transmitted through said network by said at least one subscriber and causes delivery of said medical software through said network to said software executing subscriber (col.6, line 47 to col. 7, line 6)".

Applicant respectfully disagrees. The quoted portions do not teach that which the Examiner alleges. Col. 4, line 30-36 states "The type of data stored in the master library... etc." There is absolutely no mention of "subscriber", or "software executing subscriber" or " medical software" running.

The other quoted portion also does not teach that which the Examiner contends. Col. 6, line 47- col. 7, line 6 discusses the "master library" and its link to the external sources and use of various audio and visual means. There is no mention of "software executing subscriber", "running of medical software", "delivery of medical software" or "delivery of the medical software" through the network to the software executing subscriber".

Thus, clearly, on its face, Claim 78 is allowable over Ballantyne combined with Kotake. Even if extended, the combined teachings still would not make obvious the structure and functions recited in claim 78. This invention stands on its own and is patentable. We define the server and subscriber as using software to register and access medical images and information through the network using a single

server. Thus, inexpensively a large number of doctors, for example, with computers can connect up through the "generally available network" such as the Internet, to the "single server" and using software access the single server to process and obtain medical images and information. Thus, our invention enable us to increase medical services accessibility at a low cost. Our invention is deserving of a patent, and claim 78 is allowable.

#### CLAIM 79

In addition to allegations directed to main claim 76, the Examiner alleges that Ballantyne/Kotake discloses "wherein two or more subscribers are provided , each connected to said network (Doctors offices and clinics Laboratories, fig. 1)"

Applicant respectfully disagrees. The "network" referred to in main claim 76 is that which is "generally available" to the public, such as the internet.

The communication cable between the "doctors office" and "clinic laboratories" in fig. 1, are located within the hospital system and connects up to the master library (ML). They are not outside the hospital and generally available to the public , such as connection to the internet.

We contend that this claim is patentable standing alone in that the subscribers are two or more, and as such defines inter-connectability of multiple subscribers, such as a number of doctors so as to be accessible to a single server for storage and access of medical images and information. Advantageously, a large number of subscribers can thus advantageously and cheaply have access to

various medical images and information without having its own expensive equipment. Claim 79 is thus believed allowable by itself. No extension of Ballantyne and Kotake would make obvious the features in combination with the features of claim 76.

#### CLAIM 80

In addition to the allegations directed to main claim 76, the Examiner alleges that BALLantyne/Kotake discloses "wherein said at least one subscriber comprises means for specifying types of image processing to be communicated through said network to said single server (col. 4, lines 30-36)". This is the same wording as claim 80.

Applicant respectfully disagrees. In point of fact, Ballantyne does not have its subscriber connected via a "generally available network" to a "single sever". Ballantyne uses a plurality of servers and limits himself to a master library (ML) in a hospital. Access is only within the hospital to the ML.

Moreover, Ballantyne does not have means in the subscriber "for specifying type of image processing to be communicated" to the "single server".

Ballantyne, at col. 4, lines 30-36 lists "types of data stored in the master library". Clearly, no combination of Ballantyne and Kotake would make obvious the subject matter of claim 80. Thus, claim 80 is patentable standing alone.

Our invention enables the remote subscriber to specify type of imaging, and the "single server" located at another location can then do the processing, without the subscriber having to spend money on any processing equipment. Thus, the invention is advantageous and enables inexpensive medical care to be widespread, for little cost

and reliably and conveniently. Accordingly, claim 80 recites an invention which deserves patent protection.

CLAIM 81

In addition to the allegations directed to main claim 76, the Examiner alleges that Ballantyne/Kotake discloses "wherein said single server comprises means for informing said at least one subscriber through said network of type of imaging processing to be applied (Col. 4, lines 52-65)". The wording is the same as in claim 81.

Applicant respectfully disagrees. The quoted portion, col. 4, lines 52-65 describes the ML (master library) as having a plurality of different types of servers (not a single server). But, there is not one word of these being limited to a single server for use by the subscribers. In fact, Ballantyne uses a PLURALITY OF SERVERS. Also, Ballantyne has no such "single server"; no "means for informing said at least one subscriber through said network (which our claim state is "generally available" , not within a private hospital) of type of image processing to be applied". There is no such feedback of instruction given in Ballantyne.

Thus, on its face, claim 81 is allowable over the combined references. No extensions thereof would make obvious the invention of claim 81. Advantageously, the single server can inform the subscriber of type of processing being applied so that it can continue or stop same as desired. No such system of claim 81 exists in the art. Accordingly, claim 81 is allowable on its face and standing alone.

CLAIM 88

The Examiner contends "Regarding claim 88, all the limitations of this claim have been noted in the rejection of claims 76 and 80 and 81 above. It is therefore rejected as set forth above. We find this puzzling since main claim 88 is directed to a method; whereas the others are all directed to an apparatus.

We think the Examiner has only repeated her prior rejections without any thought as to applicability. We brought this to the attention of the Examiner, but, no response was ever received. Thus, we will handle this rejection of claim 88, as being without any merit and request the Board of Appeals to overrule the Examiner and allow this claim as is since the rejection of claim 88 is pure nonsense and has no basis therefor.

The reason we have placed claim 88, which is a main claim, in the discussion at this point, is that in the Office Action, the Examiner placed the rejection of claim 88 after the rejection of claim 81.

Since this is a main claim, we have also discussed claim 88 priorly.

Since there is no LEGAL REJECTION of claim 88, there is also no legal rejection existing of subclaims 89-92 depended therefrom. It is thus legally proper for the Board of Appeals to overrule the Examiner and allow all of the method claims 88-92.

The reason, we think, that the Examiner has gotten into this pickle is because she has not carefully considered the rejection, the references and reasons set forth for the rejections during the prosecution. All she did was take the first rejection, and sub-

and then substitute different numbers and wording... but.. keeping the basic rejection even though applicant repeatedly changed the wording of the claims. Since this situation is of the Examiner's own making, these claims 88-92 should be allowed without further ado by the Board of Appeals.

More will be discussed hereinafter with respect to the sub-claims 89-92 depended from main claim 88 (method claims).

CLAIM 82

In addition to the allegations directed to main claim 76, the Examiner alleges that Ballantyne/Kotake discloses "wherein said single server comprises means for establishing communication with said at least one subscriber when image processing is completed (col. 6, lines 32-45)" and "means for transmitting through said network said medical images subjected to said image processing to said at least one subscriber (col. 9, lines 40-50)". The wording is the same as in the claim.

Applicant respectfully disagrees. Col. 6, lines 32-45 states that the master library (ML) is linked to external sources via DBS, twisted pairs, etc. But, there is no teaching of any "means for establishing communication with said at least one subscriber WHEN IMAGE PROCESSING IS COMPLETED".

Moreover, at col. 9, lines 40-50 it is disclosed that the data is "compressed and decompressed. But, there is no teaching or any means for "transmitting through said network said medical images subjected to said image processing to said at least one subscriber".

Thus, claim 82 per se is allowable over combined references

Ballantyne and Kotake and stands by itself on its own merit. Advantageously, the server informs the subscriber when image processing is completed and then transmits the processed image. Accordingly, the remote subscriber can have all the advantages of processing of medical images and information without having the necessary equipment at the remote location. This is done at the server location, and then transmitted over the network to the subscriber. Now, with our invention it is possible for a doctor in a rural community to have all the advantages of big city practice without the expenses of equipment. Also, the subscriber can store the images, process the images, and access same, all through a "generally available network". Clearly, claim 82 is allowable, by itself.

#### CLAIM 83

In addition to the comments regarding main claim 76, the Examiner contends that BALLANTYNE/KOTAKE discloses "wherein said at least one subscriber comprises means for transmitting through said network to said server, a request for medical images subjected to image processing (col. 16, line 22-49); and "means for receiving said medical image from said single server through said network (col. 16, lines 50-61)" The wording is similar to claim 83.

"Applicant respectfully disagrees with the Examiner. Col. 16 line 22-49 describes "the regional medical library". But, careful study shows no "means for transmitting .. a request for medical images subjected to image processing.."

Furthermore, col. 16, lines 50-61 describes allocation of dedie



cated services to specialized medical research , e.g. diabetes. BUT, careful study shows that there is no disclosure of means for receiving said medical images which have been subjected to image processing, from the single server to the subscriber through the network. Ballantyne has no "single server".. he must have a plurality of servers to operate his system according to his objectives. Also, he does not "processing" the medical images in the "single server".

Accordingly, on its face, claim 83 is allowable over the combined cited art Ballantyne and Kotake. No extension of the combined two would make obvious the feature recited in claim 83. Thus, claim 83 is allowable on its own. Clearly, and advantageously, our entire system enables the subscriber to request medical images subejcted to processing by contacting the single server through the network. This is not made obvious by the cited combined references. Clearly, claim 83 is allowable by itself.

#### CLAIM 84.

In addition to the comments regarding main claim 76, the Examiner alleges that Ballantyne/Kotake discloses: "wherein said single server comprises means for storing each medical image in at least one form before image processing (as compressed) and means for storing each medical image in at least one form (decompressed) after said image processing (Col. 14, lines 26-44)". Except for the enclosed portions, the wording is the same as claim 84.

Col. 11, lines 26-44 discusses a CRT, LCD, etc in the monitor and different power states. This results in power savings. Various modems may be used.

But, that has nothing to do with a "single server" (which Ballantyne does not have.. he uses a plurality of different servers) and in which is stored information in one form before processing and in one form after processing. By the way, there is no mention at this portion of Ballantyne of compression and decompression. We are not sure exactly what the Examiner is getting at. Clearly, the quoted portion at col. 11, lines 26-44 do not disclose that which the Examiner alleges.

In any case, per se, claim 84 is allowable over the combined art Ballantyne and Kotake. No extension thereof would make obvious the subject matter of claim 84, standing alone. Thus, this claim 84 is itself patentable and allowable.

Advantageously, this feature of means in the "single server" which holds the information in one form prior to processing and in one form (which could be different form than at the prior state) after processing, enables the storage of processed medical images and information, which could then be sent to the remote subscriber. This allows the remote subscriber to have access to different, prior and after processing, images without necessity of having at his location means for processing such data. This is clearly advantageous in that now we can have medical services in all different areas of the country without requirement of expensive equipment. Thus, claim 84 is allowable standing on its own.

#### CLAIM 86

In addition to the comments regarding main claim 76, the Examiner alleges that Ballantyne/Kotake discloses "wherein said single server comprises means for polling said at least one sub-

scriber through said network to collect medical images before image processing (col. 11, lines 11-27)". The wording is the same as claim 86.

Applicant respectfully disagrees with the Examiner, the quoted portion does not teach means for POLLING the subscriber.

Col. 11, line 11-27 discusses the PCS (personal care station) receives information in form of video and text. By means of a PDA (personal data assistant), a care giver can access the library for information. Note it is not the ML (or server therein) that is requesting information or "polling". It is the PDA which requests information from the ML. This is opposite of what our claim 86 recites.

Accordingly, claim 86 standing alone is allowable over the cited art. No combination or extension of the combination thereof would make obvious the "means for polling" in the "single server". Ballantyne and Kotake are different in objectives from the instant invention.

Advantageously, using our invention, the single server can obtain all sorts of data from the subscriber and employ same for research and analysis. For example, from multiple subscribers the information polled can be tabulated, for example, to determine percentages of diabetes prone population and relate same to ethnic origin, etc. That is not possible with Ballantyne and/or Kotake. Accordingly, claim 86 standing alone is allowable.

IT SHOULD BE NOTED THAT THE FOLLOWING CLAIMS 89-92 ARE DEPENDENT FROM MAIN CLAIM 88. HOWEVER, THERE IS NO VALID REJECTION OF THE MAIN CLAIM 88... HENCE, ALL OF THE SUBCLAIMS 89-92 ARE ALSO

NOT VALIDLY REJECTED. ACCORDINGLY, PURSUANT TO THE PATENT LAW, ALL OF THESE "METHOD" CLAIMS 88-92 ARE NOT REJECTED, AND ARE OR SHOULD BE CONSIDERED TO BE ALLOWED. FURTHER DISCUSSION OF THIS POINT APPEARS ABOVE IN DISCUSSION OF THE MAIN CLAIM 88.

The following discussion of sub-claims 89-92 is not to be considered as any admission on applicant's part that claims 88-92 are validly rejected. In point of fact and legally, applicant's position is that these claims are or should be allowed.

However, in order to be completely responsive, even though the error above referred to is believed fatal to the Examiner's position, applicant will hereinbelow discuss in details the Examiner's comments in regard to each of claims 89-92.

#### CLAIM 89

The Examiner states "Regarding claim 89, all the limitations of this claim have been noted in the rejection of claims 83 and 88 above" As to claim 83, this is an apparatus (or system) claim. Thus, the comments with respect thereto are not particularly relevant to any discussion of claim 89. As to claim 88, the Examiner alleged "Regarding claim 88, all the limitations of this claim have been noted in the rejection of claims 76, 80 and 81 above". But, all of these claims are apparatus (or system) claims. Thus, the comments with respect thereto are not particularly relevant to any discussion of claim 89 which is directed to a method.

In point of fact.. claim 88 has not be validly rejected. Thus, there can be no valid rejection of claim 89 which depends therefrom.

Be that as it may, the Examiner further alleges that Ballantyne/Kotake discloses "reading medical images from said data base, sending

each medical image from said single server through said network to said one subscriber and display said medical images by said one subscriber (col. 13, line 43-col. 14, line 44)" The wording is similar to claim 89.

Applicant respectfully disagrees with the Examiner. The quoted portion, col. 13, line 43-col. 14, line 44, describes the PDA and lists various functions thereof.

But, nowhere is there mention of the method steps recited in claim 89.

Accordingly, claim 89, standing alone is allowable over the combined art Ballantyne / Kotake, and no extension thereof would make obvious the method steps set forth in claim 89. Advantageously, the method steps allow us to provide a "generally available network" based single server which can be readily accessed by a remote subscriber with suitable checking of the legitimacy of the subscriber and recording and transmitting authorized data through the network to the single server. From there, in the data base, the subscriber can obtain the medical images and transmitted through the network obtain same and display same at the subscriber. Clearly, claim 89 is allowable standing alone.

#### CLAIM 90

The Examiner contends "Regarding claim 90, all the limitations of this claim have been noted in the rejection of claim 88 above". This is without merit as discussed in our comments regarding claim 89, and the same discussion is applicable hereat. However, as with claim 89, we are discussing claim 90 to be complete in our arguments.

The Examiner contends that Ballantyne/Kotake discloses" wherein

said one subscriber requests through said network of said single subscriber registration of said medical images and comprising the further steps of requesting imaging condition by said single server to said one subscriber or by said one subscriber to said single server through said network (col. 9, line 15-60)"; and "sending said imaging conditions by said one subscriber to said single server through said network or by said single server to said one subscriber through said network (col 11, lines 11-27): and "said single server registering said medical images according to imaging conditions in said data base (col 11, lines 11-27)". The wording is similar to claim 90.

Applicant respectfully disagrees with the Examiner. Col. 9, lines 15-60 describes an operating using menu graphic interface or "window" type means and input buttons by a patient to select various services. But, there is no "requesting by the subscriber" of registration of medical images, or in accordance with certain imaging conditions, through the "generally available network". Col. 11, lines 11-27 describes the PCS using a call interface and a PDA. But, there is no mention of "imaging conditions" being requested by the subscriber or the other way around.

Thus, clearly claim 90 is allowable over the combined cited art. No extension thereof would make obvious the invention of claim 90, considered standing alone.

Advantageously, the invention of claim 90 recites features which are registration according to certain imaging conditions going both ways from and to the subscriber and single server via the network. Thus, the entire system is patentable on its own. Claim 90 is thus allowable.

CLAIM 91.

The Examiner alleges "Regarding claim 91, all the limitations of this claim have been noted in the rejection of claims 76 , 88 and 89 above. It is therefore rejected as set forth above.

This is confusing, but also, non-sense. As above discussed, claim 76 is a main claim directed to an apparatus (system). Thus, the comments regarding same are not particularly relevant hereat. As to claim 88, the Examiner alleged "Regarding claim 88, all the limitations of this claim have been noted in the rejection of claims 76, 80 and 81" All of claims 76, 80 and 81 are directed to the apparatus, and comments regarding same are not particularly relevant hereat. Claim 89 is a sub-claim dependent on method claim , which is a main claim, 88. Since the basis of rejection of claim 89 depended on the basis of rejection of claim 88, and the basis of rejection of claim 88 is meaningless.. clearly, the basis of rejection of claim 91 is also meaningless.

Thus, claim 91 should be considered allowed.

No further discussion can be presented since, no factual basis in the disclosures of Ballantyne and/or Kotake is alleged.

CLAIM 92

The Examiner alleges "Regarding claim 92, all the limitations of this claim have been noted in the rejection of claim 91 above" Since there is no legal basis for rejection of claim 91, there is no legal basis for rejection of claim 92. But, for sake of completeness, we will discuss the Examiner's further comments, namely, The Examiner alleges that Ballantyne/Kotake discloses "wherein said

single server further sends through said network to said one subscriber request for identification information and said one subscriber sends such identification information to said single server through said network, wherein said single server reads medical images from said data base and process said medical images prior to sending results thereof to said one subscriber through said network (col. 9, lines 16-60)" The wording is similar to claim 92.

Applicant respectfully disagrees with the Examiner. The quoted part col. 9, lines 16-60, As discussed in the rejection of claim 90, this portion describes an operation using menu graphic interface or "window" type means and input buttons by a patient to select various services. But, there is no "requesting identification information" nor sending of same from the subscriber to the single server through the network, nor then is there reading of the medical images by the single server from the data base and then sending of same to the subscriber. Thus, clearly, claim 92 is allowable over any combination and extension of the cited art. Clearly, no extension of the cited art would make obvious under 103 the instant invention of claim 92, standing alone.

Advantageously, our method claims including claim 92 recites the steps of requesting and providing identification information using a "single subscriber" and a remote subscriber so as to enable registration and accessing of medical images/information. Clearly, claim 92 is allowable on its own.



CLAIM 77 REJECTION NOT SUPPORTED BY FACTS: CLAIM ALLOWABLE

Claim 77 recites the following, in plain terms:

The subscriber comprises a "hard copy device".

The subscriber sends "image identifier information" to

(A) the hard copy device; and

(B) the server, through the "network".

The "hard copy device" receives

(A) "medical images" corresponding to the "image identifier information" from the "server" through the "network"; and

(B) then, makes a hard copy of the "medical image".

It appears that the Examiner may not have completely understood exactly what claim 77 stated. The above explanation should clarify matters so that she will fully understand that the allegations of what Ballantye and Roewer teaches still will not suffice legally to support the 103 rejection.

The Examiner alleges that Roewer discloses:

"wherein said at least one subscriber transmits format information including image identifier information to said hard copy device (col. 10, line 34-57)" and

"wherein hard copy device receives delivery information through said images corresponding to said image identifier information through said network and then provides a hard copy of said medical images (col. 11, lines 45-51)"

The Examiner's error is in not reading the exact wording of the claim. What the Claim 77 recites is not taught by any of the cited references Ballantyne, Kotake and Roewer regardless of how combined. The Examiner admits that the recitation of claim 77 is

is not taught by any combination of Ballantyne and Kotake. The Examiner then alleges that the recited elements of claim 77 are taught by Roewer, and specifically at the portions thereof cited by the Examiner.

First, the Examiner's interpretation of Ballantyne is without factual support. The portion (col. 6, lines 20-31) of Ballantyne cited by the Examiner does not (negative) state that there is a "hard copy" device in the "at least one subscriber". Thus, her entire rejection falls apart since the premise of her argument is not factually supported.

Ballantyne states "image material existing in hard copy FORMAT". There is no teaching that there is "at least one subscriber" "comprising a HARD COPY DEVICE".

The portion (col. 10, lines 34-54) cited in Roewer states only "... the operator may submit the new composition in the ACR-NEMA format for hard copy printing". Roewer does not teach a hard copy device in the subscriber, nor processing including such hard copy device in the information from the server through a network.

The portion (col. 11, lines 45-51) cited in Roewer states only that the interface selects patient image data and allow selection of a target connected to produce hard copies. But, this is not what is recited by claim 77. It is like comparing apples and oranges.

In summary, even if all the references are combined and extended, there would still be no teaching of what we above stated as being recited in claim 77. No extension of the teaches would make obvious under Sec. 103, the recited invention. Accordingly, the rejection of

claim 77 should be overruled and claim 77 allowed. Accordingly, applicant respectfully requests such ruling by the Board.

It is to be understood that the above arguments directed to claim 77, are in addition to the arguments set forth with respect to the main claim 76 from which it depends, and that all of such arguments are to be considered to be part hereof by reference and are to be considered to be repeated hereat.

In addition it is to be understood that even though claim 77 is a subclaim, the subject matter hereof is patentable above and beyond the subject matter of the main claim 76 from which it depends.

The entire system of claims 76 combined with claim 77, that is including the "hard copy device" and means for producing and obtaining the hard copy, is patentable in itself. The result of the entire system is to obtain from a remote location, a hard copy of the medical images and information simply, economically, and reliably and in a security controlled environment. The combined references clearly do not teach or make obvious, such a system.

Also, it is thus possible for the single server to instruct the subscriber's hard copy device to make the copies so that even the subscriber need not have any software or instruction device to order such hard copy to be made. All of that can be done from the server. Thus, claim 77 is clearly allowable as defining an allowable invention in itself.

CLAIMS 85 and 87 REJECTIONS NOT SUPPORTED BY FACTS,  
CLAIMS 85,87 ALLOWABLE

Each of claims 85 and 87, which are subclaims, is allowable in its own right as defining an invention which is not made obvious under sec. 103 by the cited references Ballantyne, Kotake and Tanaka. In each of these subclaims, the single server functions to perform certain operations on the medical images and information, and then transmit same to the subscriber for its use. Thus, the means and method recited in claims 85 and 87, enable the remote subscriber to have certain functions performed on the medical images and information prior to their being sent to the subscriber. Thus, advantageously, the subscriber, such as a doctor in a remote location, does not need the mechanism for operating on the medical images and information and can rely upon the single server which is accessed through the "generally available network" such as the internet. As is well known, that opens up an entirely new and widespread way of expanded diagnosis and treatment, without the expenses required to be endured by the remotely located doctor, for example.

CLAIM 85. Turning now specifically to Claim 85 which depends from Claim 83 (which is described elsewhere more specifically) and main claim 76, in Claim 85, there is recited "part or all of the medical information (which is subjected to image processing)" is requested and sent through the network upon request by the subscriber.

The Examiner contends Ballantyne and Kotake is not alleged to teach this feature. But, the Examiner alleges TANAKA teaches "wherein said request for only part or all of said medical images and wherein part or all of said medical images are sent through

said network to said at least one subscriber" (Col. 8, lines 3-25).

The Examiner ERRONEOUSLY left out one limitation which appears in claim 83, from which claim 85, depends. Namely, she left out that the medical images were "subjected to image processing". That is to say, claim 83 which depends from claim 76 generally claims all of the medical information which has been subjected to processing in the server, is sent through the network to the subscriber. Claim 85, then recites that "part or all" of such medical images and information... which has been subjected to processing... is sent via the network from the server to the subscriber.

As above discussed, each of claims 83 and 85 which recite that "processed medical images and information" (which is processed in the server) is then sent via the network to the subscriber. This enables the subscriber to obtain processed images without necessity of having its own processing equipment. Claim 85 recites that only a "part" of such processed images and information is sent via the network to the subscriber from the server.

In rejecting claim 83, the Examiner cited col. 6, lines 22-49 and col. 16, lines 50-61. of BALLANTYNE. BUT, CLEARLY, CAREFUL STUDY shows that neither of these cited portions the "medical images and information" as being "subjected to image processing" in the single server.. nor any transmitting of same through the "generally available network" from the server to the subscriber.

Thus, on a basic level, the Examiner's rejection is not supported by the facts of the case. In point of fact, it appears that the

Examiner may not have completely understood the words in the claims. We hope the above discussion will point the Examiner in the intended direction. We are certain that with the above discussion, the Examiner will see clearly that no combination of Ballantyne, Kotake and Tanaka would make obvious the subject matter of claim 85.

Going further, the Tanaka reference at the portion cited by the Examiner, namely at col. 8, lines 3-25, does not teach or suggest by any extension thereof, the recited invention. This refers to reducing traffic between terminal and server, and transfer of the medical information at high speeds. There is reference to part of the "relay server" having a cache, and also, a doctor can order medical images data and related data. But, nowhere does it state that part or all of medical images which were priorly processed in the server is transmitted through the network to the subscriber.

Moreover, no extension of the combination of references would make obvious the subject matter of claim 85. Combining these references would still leave missing a system where medical images and information is processed in a single server and then such processed images and information sent through a generally available network, such as an internet, to a remote subscriber so that the remote subscriber itself does not have to have equipment for processing itself.

CLAIM 87 depends directly from main claim 76. As above stated, we believe this claim, is allowable standing alone when combined with claim 76. As with claim 85, the subscriber can have the images processed in the server, and by mere signals sent from the server through the network have the processed images available at the subscriber. The subscriber does not need the processing equipment itself,

thereby greatly increasing availability of medical data to a large number of doctors, for example, without cost of equipment being borne by the numerous doctors.

The Examiner alleges that Tanaka teaches "wherein said single server comprises means for sending through said network to a delivery destination imaging conditions for said medical images (col. 7, line 46-col.8, line 15)" This is a mere recitation of claim 87.

However, TANAKA does NOT teach this. First of all, we use a single server and the destination is a subscriber. That is to say, in our invention, the processing and condition signalling is provided at the server. Thus, the remote subscriber does not need the equipment for determining conditions of imaging. This, clearly, is advantageous in that the remotely located doctor, for example, can obtain data and processed data, without requirement of added equipment. The various conditions of data imaging, etc, can be originated at the server. Thus, clearly, the invention of claim 87 standing alone is novel and patentable.

As above discussed, clearly Ballantyne and Kotake combined do not teach the elements and structure and functions recited in main claim 76 from which claim 87 depends. In point of fact, the invention of claim 76 is not taught, nor made obvious by the combination of Ballantyne, Kotake and Tanaka. Nowhere is there taught using a single server with the various functions recited which is accessible through the generally available network by one or more remotely located subscribers wherein the functions of the

server can be shared and used by the subscribers, thereby removing any necessity of the subscriber to have means for performing such functions. This concept has clearly reduced the cost of medical services and has increased the efficiency and availability of medical serves regardless of where located. For example, a doctor in a remote area of Wyoming can register, store and access medical images and data ... and also, have image processing performed thereon... at the centrally located server, for example in New York. The doctor in Wyoming does not need to have expensive equipment, as was the previous case, in order to have the processed data. All he needs is a simple computer.

In view of the foregoing, clearly, standing alone claims 85 and 87 recite an invention which is novel and patentable. Accordingly, allowance thereof is respectfully solicited.



#7. SUMMARY AND CONCLUSIONS AND PRAYER FOR RELIEF

In view of the detailed foregoing brief, applicant respectfully submits that his invention as recited in claims 76-92 is novel and patentable over the cited combination of arts Ballantyne, Kotake, Roewer and Tanaka in different combinations as discussed above. None of these references considered singly or in combination teaches or makes obvious the instantly claimed invention. None of the cited references whether considered singly or in combination, regardless of how extended, would make obvious the invention recited in claims 76-92.

In view thereof, applicant respectfully prays that the Board of Appeals reconsider the Examiner's rejection of claims 76-92, and allow the claims 76-92, and allow the application to issue as a patent.

APPLICANT HEREBY REQUEST AN ORAL HEARING IN THIS APPEAL.

Respectfully

M. KOJIMA, REG.NO. 19,785

MOONRAY KOJIMA

BOX 627

WILLIAMSTOWN, MA 01267

Tel (413)458-2880

FAX (413)458-2788

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76. A medical image servicing system comprising:

- a network generally available to the public;
- at least one subscriber connected to said network for transmitting and receiving medical images and information through said network; and
- a single server connected to said network for servicing said at least one subscriber upon signalling by said at least one subscriber and through said network, said single server comprising:
  - a data base;
  - means for checking and verifying legitimacy of a subscriber seeking to access desired medical images and information by signalling through said network;
  - means for registering in said data base medical images and information transmitted through said network by said at least one subscriber; and
  - means for processing and delivering said medical images and information through said network to said subscriber seeking access after checking and verifying legitimacy of said subscriber to said desired medical images and information, said medical images being associated with at least one image selected from the group consisting of MRI, X-ray CT, ultrasound, PET, digitized X-ray and CR; and

wherein said single server further comprising:

means for compressing in data size said medical images when transmitted through said network and for decompressing in data size said medical images to original data size when received through said network by said one subscriber seeking access; and

means for producing backup of said medical images registered in said data base.

77. The system of claim 76, wherein said at least one subscriber comprises a hard copy device; and wherein said at least one subscriber transmits format information including image identifier information to said hard copy device and through said network to said single server; and wherein said hard copy device receives from said single server through said network delivery of said medical images corresponding to said image identifier information and then provides a hard copy of said medical images.

78. The system of claim 76, wherein said at least one subscriber comprises a software executing subscriber running medical software for transmission through said network to said single server; and wherein said single server manages medical software and registers said medical software transmitted through said network by said at least one subscriber in said data base and causes delivery of said medical software through said network to said software executing subscriber.

79. The system of claim 76, wherein two or more subscribers are provided, each connected to said network.

80. The system of claim 76, wherein said at least one subscriber comprises means for specifying type of image processing to be communicated through said network to said single server.

81. The system of claim 76, wherein said single server comprises means for informing said at least one subscriber through said network of type of image processing to be applied.

82. The system of claim 76, wherein said single server comprises means for establishing communication through said network with said at least one subscriber when image processing is completed; and means for transmitting through said network said medical images subjected to said image processing to said at least one subscriber.

83. The system of claim 76, wherein said at least one subscriber comprises means for transmitting through said network to said single server, a request for medical images subjected to image processing; and means for receiving said medical images from said single server through said network.

84. The system of claim 76, wherein said single server comprises means for storing each medical image in at least one form before image processing; and means for storing each medical image in at least one form after said image processing.

85. The system of claim 83, wherein said request is for only part or all of said medical images and wherein said part or all of said medical images are sent through said network to said at least one subscriber.

86. The system of claim 76, wherein said single server comprises means for polling said at least one subscriber through said network to collect medical images before image processing.

87. The system of claim 76, wherein said single server comprises means for sending through said network to a delivery destination imaging conditions for said medical images.

88. A medical image service method utilizing a network generally available to the public, a plurality of subscribers connected to the network, and a single server connected to the network for commonly servicing said plurality of subscribers upon signaling therefrom, said method comprising the steps of:

one of said plurality of subscribers requesting register, delivery and/or processing of medical images through signals sent through said network to said single server;

checking and verifying legitimacy of the request from said one subscriber transmitted through said network to said single server and when such request is determined to be legitimate causing a signal to be sent through said network to said one subscriber to request the medical images to be registered, delivered and/or processed;

said one subscriber then sending through said network said medical images to said single server; and

registering, delivering and/or processing said medical images in a data base disposed in said single server.

89. The method of claim 88, wherein said one subscriber requests delivery of said medical images; and comprising the further steps of:

requesting identifier information by said single server through said network from said one subscriber;

sending identifier information by said one subscriber to said single server through said network;

reading medical images from said data base in said single server;

sending each medical image from said single server through said network to said one subscriber; and

displaying said medical images by said one subscriber.

90. The method of claim 88, wherein said one subscriber requests through said network of said single server registration of said medical images; and comprising the further steps of:

requesting imaging conditions by said single server to said one subscriber or by said one subscriber to said single server through said network;

sending said imaging conditions by said one subscriber to said single server through said network or by said single server to said subscriber through said network; and

said single server registering said medical images according to imaging conditions in said data base.

91. The method of claim 88, wherein said one subscriber requests of said single server by signalling through said network processing of medical images, and comprising the further steps of:

said single server processing said medical images;

said single server then sending results of processing through said network to said one subscriber; and

causing said one subscriber to display results of said processing of said medical images.

92. The method of claim 91, wherein said single server further sends through said network to said one subscriber request for identification information, and said one subscriber sends such identification information to said single server through said network; wherein said single server reads medical images from said data base and processes said medical images prior to sending results thereof to said one subscriber through said network.